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LOUISIANA
Conservationist

January/February 1984

Jesse J. Guidry, *Secretary*

comments . . .

As is customary in all types of businesses, agricultural activities, government, resource management and a host of other activities in which man engages, there comes a time to take inventory, a moment to reflect on what has been accomplished and what remains to be done.

It is such an inventory at the outset of a new year, or during a period of transition in management, that provides an accurate analysis of what has been completed and allows setting goals for the future.

If I was asked to name a single outstanding activity of the Department of Wildlife and Fisheries in the past few years, it would be the state's and the department's land acquisition program that has added a substantial amount of land to the wildlife management area system both by permanent donation and outright purchase.

The 70,971 acres donated to the State of Louisiana to be managed for all time by the department for outdoor recreation amounted to lasting gifts that can be enhanced only with the passing of time. Dow Chemical Company, the Joyce Foundation and International Paper Company are to be congratulated and respected for their interest and concern.

Purchase in late December of 9,823.47 acres in the Tensas, and the taking of an option for one year of an additional 4,887.63 acres in an adjacent tract, coupled with the direct purchase of 10,232 acres in the Atchafalaya basin September 13 represented two acquisitions that would have been termed impossible a year ago.

Later in January when 6,097 acres of the Iwanta Tract at the southern tip of the Pearl River Wildlife Management Area are purchased, and an option is negotiated for three years on an additional 2,007 acres, the total number of acres purchased or to be purchased will be 33,047.12.

It is icing on the cake to mention that we have available $4.5 million for acquisition of upland game lands vitally necessary to expand the department's quail and upland game programs for the public.

With donated lands of 70,971 acres, and some 33,047 acres either purchased or being negotiated for, the land program during the past few years can be considered of major importance to the people of Louisiana.

Naturally, as wildlife administrators, we realize that proper management of those newly acquired acres, as well as other lands that have been under department control for many years, is hinged to habitat enhancement and programs that increase and improve existing stocks of wildlife and fish.

In freshwater fisheries management, the department must continue its good efforts to promote, publicize, and make attractive its striped bass fishery. In many other southern and southeastern states, the striped bass fishery is an important drawing card for tourist/fishing families. There is no reason why Louisiana cannot capitalize on this important recreational fishery.

Much remains to be done to avert a possible confrontation between commercial fishermen and sportsmen in the utilization of speckled trout and redfish. Certainly, the sentiments of consumer groups should be considered in any long-range solution of the problem that exists and has existed for a number of years. Much good was accomplished in the past year in bringing all user groups to a common conference table, but much remains to be done before there is a final solution to the problem.

It is possible that within a year or slightly more, certain pilot or demonstration programs to deter, halt, slow down, or restore large areas of the Louisiana coast from relentless erosion will show beneficial results. Vast damage to the state's estuarine areas, and eventual loss of its marshes will bring about a change in the lifestyle of a people who have been dependent on shrimping, oystering and crabbing for generations, and to whom commercial and recreational fishing, trapping and the sport of waterfowling have represented a way of life unequalled anywhere else.

In taking inventory over the harvesting of wildlife and fisheries resources over the past few years, it is gratifying to note that in 1981 we experienced the greatest shrimp production in history. In 1982, Louisiana led the United States in combined seafood production, accounting for a full 20 percent of the nation's production.

As experienced custodians of these wildlife and fisheries resources, we know that many types of marine life and other wildlife are cyclic, and that there are some years of abundance and some years of scarcity—lean years. Our people have learned how to adjust and persevere during those infrequent years when things are not too good, and they know there'll be better years.

In the year immediately ahead, considerable thought should be given to complete restructuring of the department's license fees. For years they have been, and continue to be, the lowest in the nation. This is true in spite of the fact that Louisiana's wildlife and fisheries are unsurpassed. The day will come shortly when we will be more dependent on those license fees to serve as proper stewards of the state's wildlife resources.

In short, during a period of curtailed finances, the Department of Wildlife and Fisheries has been able to do a commendable job. And while much has been accomplished, there is a great deal that remains to be done.

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WINTER SQUIRRELS

By Wade Byrd
Photography by Mark Saltz

Squirrel hunting in October usually means contending with heat, mosquitoes, poor visibility because leaves are still on the trees, and a woods full of other eager squirrel hunters. There seem to be some convincing reasons for going after bushytails later in the year, when the leaves have fallen, the squirrels spend more time on the ground, and the mosquitoes and most of the other squirrel hunters are gone.

A heavy late December frost crackled softly underfoot as I trudged in the early morning glow that precedes daybreak. I was heading through knee high grass toward a small hickory ridge on the far end of a large pasture near Kentwood in northern Tangipahoa parish. The small stand of hickory tucked amid the mixed hardwood and pine had for years been a productive spot for me and even though it had no doubt yielded many bushytails already this season I was certain of success.

I had every reason to be. It was the kind of morning that squirrel hunters of my ilk dream of. The temperature hovered around freezing, the ground was dry, the wind calm and not a cloud in the sky. The faintest sliver of a moon that night hadn't provided much light for night feeding and I knew that as soon as it was light and warmed up just a bit, the chances of happening across a hungry foraging squirrel or two were excellent.

Squirrel hunting has been in my blood ever since I was a child hunting with my father's old 36-inch full-choke single barrel 12-gauge that at one time matched my height. The thrill of bagging my first squirrel remains unblemished by the passage of decades and is superseded only by the thrill of watching the excitement in my son's face during his first successful hunt.

The most sought after game animal in Louisiana, the squirrel is an amazingly adaptable creature. They can thrive in almost any locale that has mast-producing trees such as oak, beech, hickory, pecan and to a lesser extent pine and cypress. It is a common sight on a crowded intercity street to see a squirrel prancing unconcerned along a powerline from one tree to the next.

It is just this adaptability that makes hunting them a sport of almost infinite variety. Stalking the wiley squirrel among the oak-laden cheniers of the coastal parishes is a totally different sport from hunting them in the rolling hills, pine and mixed hardwood forests of parishes to the north. By the same token, the methodology of early season hunts changes with the temperature as winter approaches. When you throw in the wide variety of weapon choices ranging from the traditional shotgun to the increasingly popular black powder guns, bows and arrows and pistols, and finally to my favorite, the .22 caliber rifle, you begin to get a picture of the unparalleled diversity of hunting experiences offered by "Mr. Squirrel."

With squirrels, as is the case with many other game animals, Louisiana is particularly blessed, having more different types of squirrels than can be found in any other single state. The two species of squirrels found in the bayou state, the gray squirrel (*Sciurus carolinensis*), sometimes called the cat squirrel, and the fox squirrel (*Sciurus niger*) both have a number of subspecies. The subspecies (or geographic races) of the gray squirrel are the common southern gray found throughout the state and the bayou gray or black cat squirrel that is limited to the Atchafalaya basin, the lower Mississippi and the bayous of south Louisiana.

The larger fox squirrel has three different subspecies which include: the Bachman's, found only east of the Mississippi River in the southeast Louisiana terrace lands; the delta, the smallest of the fox squirrels that are found along the Mississippi, Tensas, Ouachita, Atchafalaya and Red River bottoms; and lastly, the largest of all Louisiana squirrels, the big-headed fox squirrel. Often weighing more than two pounds, the big-headed fox squirrel is confined to the northwest upland and southwest Louisiana terrace lands.

Interbreeding does not occur naturally between the fox and gray squirrels; however, interbreeding between the different subspecies will occur when their ranges overlap. Fall and spring are the major birth periods, while in Louisiana's warm climate mating does occur year-round. Litter size of both the promiscuously mating gray squirrels and the monogamous fox squirrel is about three. With a short gestation period of only 44-45 days, the reproductive capability of these remarkable creatures is quite high.

There are probably as many successful methods of hunting squirrels as there are squirrel hunters. I knew one particularly successful fellow who swore his approach was to run at full speed through the woods from one predetermined sitting spot to the next, while another old friend claims to this day to be able to halt running squirrels in their tracks with his loud piercing whistle. The folly of dashing through the woods loaded gun in hand and the inability to whistle much above a whisper prevents me from adequately testing either approach.

My methods are much less drastic and vary with the place and time of year. Patience would best describe my approach during the early months of the season when most of the leaves and mast are still in the trees. I will often spend the entire morning on one small productive area, moving very little. As the leaves and mast fall with the approaching winter, stealth plays an increasingly important role. This change in hunting style from patience to stealth (a style more suited to my temperament) has much to do with my preference for the latter type of squirrel hunting.

When you add to the change in hunting style the facts that during the winter months most of the squirrels have abandoned their aboreal superhighways for life closer to the ground, that many of the less dyed-in-the-wool hunters are home tucked warmly in their beds, and that there are no mosquitoes, you have what I feel is a very convincing argument for winter squirrel hunting.

The frosting on the cake of late season squirrel hunting is a direct result of the animal's amazing ability to adapt to a semi-terrestial lifestyle. Early in the season when the trees are full of leaves and the squirrels are blazing at near supersonic speeds from treetop to treetop, I am forced to use a shotgun. But when the leaves fall and the squirrels descend, I break out my .22 rifle and squirrel hunting takes on a completely different flavor. Use of the .22 rifle requires a greater degree of stealth and shooting skill, usually results in fewer wounded animals escaping and seems much more sporting.

A few years ago I switched from short hollow point ammunition to using CB caps exclusively. With the bullet velocities of an ultramodern air rifle, range is definitely a critical factor with CB caps. However, I think they are much safer and within a hundred feet or so have proven to be about as accurate and just as effective as some of the more powerful rounds. What appeals to me most about them though is the absence of noise. CB caps are quiet.

For ethical reasons as well as safety, during deer season I avoid areas heavily hunted for deer, holidays, either-sex days and as much as possible, weekends. Hunter orange is a must.

The absence of wind this particular morning meant that I didn't have to worry about remaining downwind and could enter the hickory ridge from any point I wished. I chose the east side about halfway up the side of the ridge. This way I had the sun to my back and a good shot at anything either coming over the crown of the ridge or walking along the small creek bed that snaked its way through the middle of the adjoining hollow.

It wasn't long before the sound of tiny feet on the other side of the hill caught my attention. On a dry winter day, sound is as much your ally as it is your enemy. The footsteps were moving in a circular direction around the hill toward me. I stepped back slowly, rested my rifle against a small sapling and waited motionlessly.

From around the trunk of a large hickory, first one then two grays came prancing into view. The lead squirrel would take a couple of short hops and then stop and look around, but was proceeding in a more or less straight line toward me. Its companion was following a much more cautious route, zig-zagging across the first squirrel's trail going from tree trunk to bush to tree trunk.

I braced myself and waited until the first squirrel stopped within 60 feet or so of my position and then slowly squeezed off a shot. The ever so slight sound of the round as it hit the ground behind and to the side of the lead squirrel startled it. It stopped, stood up on its hind legs and looked around. I knew this wasn't the time to be putting another round into the chamber. After a few seconds, it continued undaunted on its way (boy I like those CB caps), only now on a path more or less perpendicular to my position straight up the hill. I hurriedly, but quietly, chambered another round and the next time the squirrel stopped I didn't miss.

The second squirrel, startled somewhat by the proceedings, glanced anxiously around, its tail nervously sifting the air behind him, then quickly scooted up the opposite side of a nearby tree. I quietly chambered another round and waited.

On a clean kill I'm never in a hurry to move in and pick up a squirrel. Many a good second shot has been lost while excitedly rushing over to retrieve your prize. This, of course, doesn't apply in cases when I'm not certain of a clean kill. The waste of a wounded animal crawling off to die is a situation I find unacceptable.

Just about the time I was beginning to have doubts as to whether or not the squirrel had seen me, it circled the tree trunk and climbed up the side facing me to where the first limb joined the trunk and there took up a perch in the fork carefully surveying the scene. My first shot didn't miss this time.

It was after 10 a.m. before I bagged another and what proved to be my last squirrel of the day. I had seen and shot at several others, including a huge red fox squirrel playing boldly in a large pine tree that was surrounded by a huge briar thicket. Unknown to him, I emptied a whole clip in his direction, but at that range with CB caps, we're talking pure luck.

I first caught sight of the gray squirrel's bushy tail as it scurried around the trunk of a large beech tree a good 100 yards away down the small dry creek bed I was walking in. The huge beech stood out like a sore thumb with its leaves, most of which were brown, still clinging on for dear life.

I decided to follow the creek bed to within range of the huge tree and then quietly make my way around to the other side. As I knelt down in position, I noticed a small hole approximately 10 feet or so up the side of the tree. The bark around the hole was almost black from the continuous gnawing and scratching.

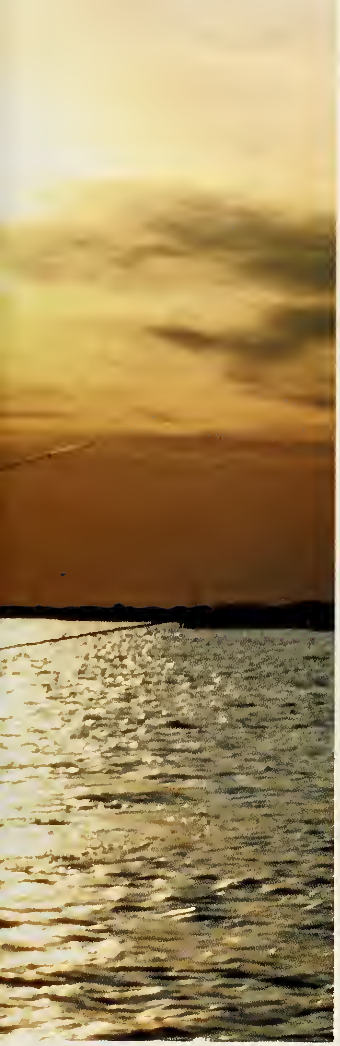
While slowly surveying the entire tree and surrounding ground, my eyes instinctively returned for quick glimpses of the hole. During one such glance, something was different. I didn't catch it as first, but when I looked hard I could see the dim outline of the squirrel's head within the hole peering out at me. We remained for the longest time, it within the hole and me out, staring at each other. Finally, ever so slowly, the big gray squirrel poked its head cautiously out through the hole and began to inspect the neighborhood. It would look off, then back at me, then look off again. Each time it looked away, I raised the rifle a little closer to firing position until finally I knelt with the rifle pointed directly at the squirrel, its body still within the hole.

Slowly it began to emerge until its front legs and head were completely out. Just a little more, I thought to myself, just a little more. Then suddenly, it pulled back to where just its face was sticking out. Not this again, I thought, I'll have to wait all over again... About that time out it darted, down and around the tree so quickly I didn't have a chance to fire. I waited for a few minutes thinking it would surely make its way back around to my side, but to no avail. Now, I improvised. Reaching down with my trigger hand I picked up a small stick and tossed it around to the other side of the tree—still nothing. The second such toss brought quick response. Around the tree the squirrel darted, but this time it made the mistake of stopping about a foot from its hole for one last look around.

With three squirrels and an empty stomach I figured it was about time to call an end to a fun and successful morning. Now if only there was some way I would convince my wife of the many joys of skinning squirrels!

Specks and Reds

By Maurice Cockerham
Photography by Mark Saltz



For saltwater fishermen, the cold temperatures of winter can be a little uncomfortable at times... But cold noses and ears are quickly forgotten when the action with speckled trout and redfish begins. Winter days offer some of the most productive fishing of the year along the Louisiana coastline.

A pleasant Louisiana fall has finally given way grudgingly to winter's cutting wind and penetrating cold. All the hunting seasons are in full swing. It's a dreary, slack time of year for sport fishermen, right? Wrong! Despite the cold and discomfort, Louisiana anglers know that those biting, overcast winter days offer some of the most productive fishing of the year, especially for saltwater anglers in the coastal marshes.

Beginning in the fall and continuing throughout the winter, the fishing in the far-flung coastal canals, bayous and lagoons picks up tremendously. With the first taste of fall weather, the big redfish (red drum or channel bass) move into the passes along the coast, luring fishermen from throughout the state. These so-called "bull reds," weighing from eight or ten pounds on up to the current state record of 56 lb.-8 oz., are the glamour kings of the winter marsh, but the smaller "rat reds," speckled trout (or spotted sea trout) and flounder crowd the inland waters in abundance. Studies have shown that these fish are present in the shallower inland waters all year, but in the winter they tend to congregate, or "school," and their movements become more predictable. During warmer periods, they will be found in the food-rich shallow lagoons, but during colder weather they will crowd into the deeper waters of canals and bayous.

Yes, the cold can be just a little uncomfortable at times, particularly during that little run from the dock to the fishing grounds in an open boat. The trick is to prepare for it ahead of time. Proper clothing, warm footwear and good windbreakers, bolstered with a good mug of steaming hot coffee at dockside, will get you there in fine fettle. Then too, you don't have to worry about sunburn so much, and there are no swarms of mosquitoes, gnats or flies hanging around and no rivulets of sweat running down your back. Once the action begins, hardly anyone notices the cold anyway, and it isn't at all unusual to see fishermen begin to shed some of that heavy clothing.

As a rule, the action will start with the ever-present speckled trout. Those hard fighting critters will hit just about any shiny or grub-like lure that a fisherman offers to them. Although the specks found in the inshore marshes tend to run a bit smaller than those taken by surf fishermen along the coast and in the big passes during warmer weather, they tend to congregate in tight groups. Once such a school is located, the action is fast and furious. In fact, it is not uncommon for anglers to quit a feeding school simply because they get exhausted by the frantic activity or because they want to try for some redfish to fill out their limit for the day. And those limits are generous in Louisiana. A sport angler is allowed a daily catch of fifty redfish or specks, or any combination of the two. Those after the really big "bull reds" are, however, budgeted a little tighter. Only two redfish in the day's catch may exceed 36 inches in overall length.

Speckled trout, or "specks," can run up to 8 or 10 pounds, but fish of that size are truly rare. The current Louisiana record is 12 lb.-6 oz. What the inshore, winter time specks lack in size, they make up in sheer numbers and fighting ability. Speckled trout display a marked preference for live shrimp, but will readily take bait shrimp, minnows, or crab meat. Most natural baits are fished with a float, and the preferred type is the weighted "popping cork." In this arrangement, the bait is dangled beneath the cork, usually on a shad rig with twin jigs. Occasionally, the angler jerks the hollow-headed float with a resulting gurgle or popping sound. This disturbance is said to attract specks in a feeding mood and it obviously does exactly that. Many anglers have watched such a float disappear shortly after "popping" it and discovered not, one but two shiny specks on the dual hook rig.

Fishermen who prefer artificial baits also find the speckled trout a willing combatant. They will strike almost anything that moves and it is virtually impossible to retrieve a bait fast enough to avoid a slashing speck. The most popular and productive lures will vary from one locale to the next, but usually the angler will find something in his tackle box that will pay off. Standard choices with long-standing records of success include the Mirrolures, Touts, Sassy Shads, and similar minnow or grub-like lures and bright metal spoons. As a rule, all work best fished at a medium depth with a fairly rapid retrieve.

One problem anglers must deal with is the very soft mouth of the speckled trout. A striking speck will usually set the hook in his mouth without much assistance from the angler. If the hook is set too forcefully by the fisherman, it is quite likely to tear free. A tight line while playing the fish is also an absolute necessity. Due, once again, to the softness of the fish's mouth, the hook tends to enlarge the original hole as the fish fights and only a little slack will enable the spunky little scrapper to throw the lure free.

One of the prime places to look for specks is in the vicinity of a weir. These dam-like water control structures, which are plentiful throughout the state's coastal marshes, are designed to prevent the water levels in the marsh from dropping below a predetermined point. As tides rise, water spills over the weir, raising the level in the marsh. When the tide recedes, the overflow effect reverses until the water level in the marsh matches the level of the weir. During these periods of tidal flow, speckled trout will often congregate on one side of a weir to feed on shrimp and minnows concentrated by the weir's blocking action.

Weir fishing is also a productive method of fishing for rat reds. These smaller redfish are often caught on the same lures or baits as speckled trout, and a "mixed bag" is not at all uncommon in any given location. Generally, however, reds stay closer to the bottom and are less likely to pursue fast moving artificial baits. Freshly cracked crab is one of the best all-around redfish baits, with chunks of bait shrimp running a close second. A problem with bottom fishing in the marsh is, of course, the ever-present blue crab. Then too, most marsh fishermen are only too happy to add a dozen or so big crabs to the day's catch. A slow and steady retrieve will bring the crab right to the boat, still aggressively munching on the bait. It can easily be netted and dropped into the ice chest.

The better artificial lures for redfish are the lead-head baits with grub bodies of soft plastic. The trick with these lures is to fish them on or very near the bottom with a slow retrieve. As a rule, the slowest retrieve will produce the biggest reds. These larger fish tend to move slowly or to "lay up" on the muddy bottom and wait for their dinner to swim or drift to them. They won't pursue a bait, nor move very far to intercept even a slow moving lure.

One of the most suprising aspects of fishing for bull reds is that a strike is quite often very gentle. In some cases, there is not even a tell-tale tap or two to indicate a strike. The lure simply stops moving, exactly as if it were snagged on the bottom. Most experienced redfish anglers will set the hook when any such interruption of a steady retrieve occurs. If the fisherman chooses to wait a moment, there may be a tug on the line, or the fish may betray his presence by moving off at an angle to the line of retrieve. Then too, a delay may result in the fish simply spitting out the lure.

Once the hook is set on a bull red, however, there is never any doubt that you have a handful of fish on the line. Brute strength is the trademark of a big red. There is none of the flashy zip and zing of the speckled trout and none of the tail-walking showmanship of the black bass. The bull red simply takes off on a relentless power drive that peels line off a protesting reel until the fish decides to change course. At that point, the angler attempts to recover as much line as possible before the big fish repeats his performance. With a redfish of substantial size, hooked on ordinary fishing tackle such as a medium or heavy casting rod, the battle may well drag on for 15 or 20 minutes. Attempting to man-handle a bull red usually guarantees a broken line, rod or reel, and little more. When the fish begins to tire, custom calls for one or more boiling rolls on the surface between runs. One of those displays will make even an experienced angler's eyes pop and more than one hapless fisherman has been astonished to the point of making a mistake and losing his fish. Somehow they always look at least twice as big as they really are, and when they are big to start with, they look enormous.

There is still another way to go after both reds and specks. It is a bit colder and a little more uncomfortable, perhaps, and it certainly requires a bit more attention to wind, water and weather conditions. The rewards, however, can be utterly fantastic. The method? Oh yes, that is to fish at night over a shell reef in one of Louisiana's many coastal bays or lagoons, or around one of the many waste gas flares dotting the coastal marshes. But that is another story for another time. Just such a trip is in the offing, with an experienced professional to show us just how it's done successfully.

In the meantime, buy yourself a good, big thermos bottle, dig out the long johns, and put some fresh line on your reel. Experienced anglers in Louisiana know that chapped lips and cold ears can equate with an ice chest full of very tasty fish and a passel of tales that will astound your cold-natured neighbors. And, you'll quickly learn that when the fishing action heats up in Louisiana's winter marsh, nobody stays cold for long.

Managing Our Marshes

By Wade Byrd

Coastal marshes are the most distinctive geographic feature of Louisiana. It's old news now that these valuable marshlands are under assault. Much has been said lately about the serious and continuing problem of marshland loss. Unfortunately, the physical loss of marshland is only the tip of the iceberg. Loss of marsh quality matches the threat of loss in quantity, as fresh, intermediate and brackish marshes, teeming with wildlife and rich in vegetation, slowly yield to ever encroaching saline waters of the gulf.

Causes of marsh loss are many and partial solutions complex, costly and in some cases possibly nonexistent. Some areas of Louisiana marsh have decreased by over 50 percent in the last 20 years and chances of recovering these areas are poor at best. Many of the areas today that are possibly lost forever were experiencing the same reduction in quality 20 years ago that is now plaguing much of the remaining marshland in Louisiana.

A thriving marsh follows a natural coastward progression of freshwater marsh—intermediate marsh— brackish marsh and finally saline marsh. Each zone in the marsh, with its characteristic vegetation, serves as home to a variety of organisms. It is these different specific zones of vegetation that give the marsh its immense diversity as a nursery or home to a wide variety of wildlife and fisheries resources. This same vegetation also plays another important role—that of preservation of the marsh itself. The semi-fluid soil of the marsh, composed almost entirely of organic matter, is held together by these living plants, and when they die or are killed off, marsh quality, and eventually quantity, suffer.

Marsh vegetative dieoffs have many causes, including uncontrolled deep peat burns, eat-outs by overpopulated wildlife and, most seriously, the relentless intrusion of saltwater from the gulf. While the first two are management problems with possible management solutions, the last is much more difficult to control. Many factors have been blamed for causing or accelerating saltwater intrusion and its resultant disastrous effects on marsh vegetation which is unable to tolerate the increased salinity. Some of these factors are indiscriminate canal dredging, leveeing and channelization of sediment rich rivers, subsidence of the land, and even a rise in the level of the gulf itself. The last two factors are naturally occurring processes beyond the control of man.

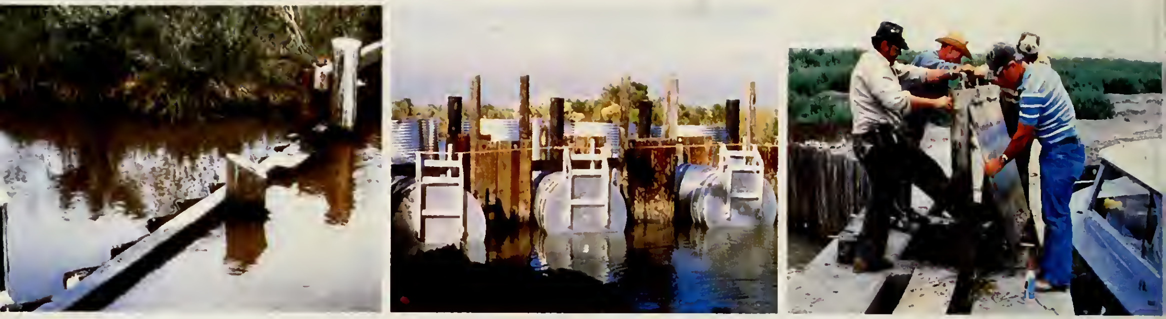
Louisiana marshes serve as nursery grounds for a thriving seafood industry whose profits run into hundreds of millions of dollars annually. But for those persons whose lives are as deeply rooted in the marsh as the healing grasses that cover its expanses, the marsh transcends pure economic value.

It is impossible to adequately describe the slight but steady tug of a big bull redfish as it gently mouths a baited shad rig, or the excitement in a child's face when he pulls up a net full of ferocious looking blue crabs. The sight of a beautiful big snow or specklebelly goose on a cold winter morning as its giant wings gracefully brake its descent is the kind of experience that is difficult to evaluate with a price tag.

For generations we have watched the marsh and its waters—ever changing yet always the same. But those times have passed. Like an old man whose recuperative powers have dimmed, the Louisiana coastal marsh is slowly dying and for those who know her best, it's like losing an old friend.

The Department of Wildlife and Fisheries, recognizing the seriousness of the problem, began research more than three decades ago on marsh management techniques designed to help preserve the integrity of the marsh, enhance its value to the whole range of wildlife and fisheries resources that depend on it and at the same time

Aerial view of brackish marsh at Rockefeller reveals canal dug for marsh management. The canal is used to drain the marsh on a 3-year cycle to promote widgeon-grass, an excellent waterfowl food.



Examples of marsh water control structures—a weir (left); a simple flap gate (center); and, a reversible flap gate (right) which allows for manipulation of water level and direction of flow.

increase its value and use by man. Many dedicated and renowned biological scientists, to whom we all owe a debt of gratitude, have made this their life's work.

Their efforts toward preservation, enhancement and increased use may at first seem to be contradictory, when, in actuality they go hand in hand. The amount of effort and money that is spent to preserve and enhance the marsh will depend directly on its value. Thus, use translates into value, which translates into a desire to see something done, which translates into a willingness to listen, learn and act.

The task of preserving the marsh, difficult in the first place, is compounded by vested interest groups that tend to view the marsh from one single perspective. This attitude ignores other values and can be detrimental to the marsh itself. A slowly dying detritus-rich (decaying plant material) marsh while being excellent habitat for shrimp and other larval marine forms is of little value to many other types of wildlife. In a few decades when nothing but barren mud flats or open water remain, it will also be of little value to the shrimp. Indiscriminate mineral exploration activities play havoc on the marsh, while a reduction in exploration activities may endanger an energy starved nation, reduce employment and actually cut funds available for marsh restoration.

A more equitable marsh management approach is one that attempts to make the marsh mutually beneficial to all parties concerned. It [illegible] an approach under which a living, thriving marsh is of value to marine and wildlife species alike and will continue to be so for future generations, and where mineral exploration and wildlife enhancement are entwined and mutually beneficial. Just such an approach forms the basis of this department's management techniques; techniques that were developed during decades of hands-on marsh management research.

One of the major cornerstones of this management approach is marsh water management, specifically marsh impoundments and semi-impoundments.

Marsh impoundments are areas of marsh that have been completely encircled by man-made or natural levees and where interior water levels and salinities are controlled by various structures. Semi-impoundments are areas of marsh in which structures have been placed within the major natural drainage canals that act to retain water in canals, lakes and ponds during periods of low tides. Both have their places as tools in the total marsh management picture.

Historically, semi-impoundments were the first on the scene. Early in this century trappers initiated the practice of placing wooden structures across bayous so the bayous would retain water during low tides and enable them to maneuver their pirogues back into the marsh. In many cases, access provided by these structures would still justify their existence. This practice has grown rapidly since its modest beginning and currently there are over 250,000 acres of Louisiana coastal marshland that are considered semi-impounded.

Creosoted wood or metal structures known as Wakefield weirs have replaced these crude early structures to form modern semi-impoundments. Placed across major drainage canals of a given section of marsh, tops of the weirs are set approximately six inches below the average level of surrounding marsh. During high tides, water flows over the weirs and into the marsh. But, during low tides, weirs prevent complete drainage of marsh canals, lakes and ponds. One study revealed that 84 percent of shallow marsh ponds not semi-impounded remained completely dry for extended periods, whereas in an adjacent semi-impounded marsh area only 2.4 percent of the ponds were dry during an equally low tide.

Benefits of semi-impoundments are derived from stabilized water levels, increased production of aquatic vegetation and buffering effects during periods of drought or abnormally high tides. Recreational opportunities provided by weirs, long recognized by marsh fishermen, are merely the frosting on the cake. Drawn by churning waters and plentiful food, fish congregate around weirs in large numbers. On many occasions, so do fishermen.

Trappers and fishermen are not the only ones to benefit from more stabilized water levels. Fur-bearing animals such as nutria, mink, otter and muskrat are able to survive periods of summer drought without moving to other areas. Waterfowl benefit greatly from increased feeding and resting sites afforded by permanent water resulting from weirs.

The effect of semi-impoundments on aquatic vegetation is equally profound.

Semi-impounded areas have been found to have three times the aquatic vegetation of surrounding natural marsh. The detrital base (amount of organic material present) of such semi-impounded areas is greatly improved. Since detritus is broken down by numerous microscopic organisms and serves as the base of the food chain for a variety of marine life, this increased detrital base is a boon to dependent marine species such as shrimp, crabs and even finfish.

There were some initial fears that placement of weirs across major drainage canals would inhibit free and natural ingress and egress of post larval and mature forms of marine organisms. Numerous studies have shown this not to be the case. Not only have weirs not significantly prohibited marine larval movements, but they may actually increase usage due to increased detrital base and more stable water levels. One study also suggests that growth rates of fish and shrimp in a semi-impounded marsh is greater than that of a natural marsh.

Perhaps the greatest long term benefit to the marsh of semi-impoundments lies in the buffering capacity of water held in the marsh by the structures. Extreme drought, when little freshwater is being infused into the marsh, and high tides or storm tides can drastically increase salinity in brackish to intermediate marshes. Such times of extreme salinity are infrequent, but when they occur severe damage can result. Plants specific to brackish or intermediate water can be reduced considerably or eliminated. These plants are important sources of food and cover for wildlife and may be all that holds the marsh soil together. In a semi-impounded area, water trapped in the canals, lakes and ponds of the marsh act as a buffer to sudden infusion in this highly saline water and serves to reduce or prevent damage by reducing rapid fluctuations in salinity.

Marsh impoundments come in many shapes, sizes and water types, including fresh, intermediate and brackish. The same levees that make impoundments the controllable environments that they are also limit their use. Costs of construction and maintenance of levees and the semi-fluid nature of the marsh soil that is unable to support levees greatly restrict their use. Placing levees on stable geologic structures such as submerged beach ridges and utilizing spoil material of a properly planned oil and gas exploration canal are among the ways of surmounting both these obstacles and demonstrating the mutual benefits of cooperation between industry and wildlife managers.

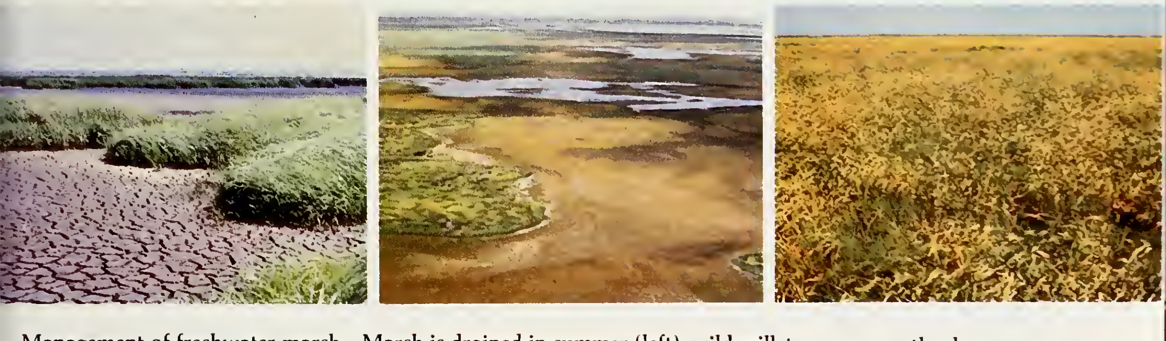
Impoundments are multi-use facilities with habitat enhancement applications for a wide variety of fish, marine organisms and wildlife. In addition, they offer many recreational opportunities to Louisiana anglers and nature enthusiasts. Water control structures and impoundments managed by the Department of Wildlife and Fisheries are popular sites for bird-watching, crabbing, shrimping and fishing. At Rockefeller Wildlife Refuge, site of many of the department managed impoundments, a viable and enthusiastic cast net fishery for shrimp has blossomed over the past few years. One unit alone is estimated to produce as much as 300,000 pounds of shrimp per year.

Waterfowl, deer, furbearers, alligators, wading and shorebirds, crabs, shrimp, crayfish, fresh and marine fishes and a wide variety of estuarine organisms thrive in the controlled environment of impoundments. A good example of the value of impoundments in increasing quality of marshland habitat is the fact that prior to the establishment of impoundments on Rockefeller Refuge less than 75,000 ducks wintered there. Today, with impoundments and proper management of them, that total has swollen to well over 400,000 birds annually, 80 percent of which use the impoundments.

Impoundment levees also offer one of the few effective defenses against saltwater intrusion. Although the levees are occasionally topped by storm tides, a fresh and intermediate marsh environment can be maintained in an impounded area that would otherwise yield to encroaching saline waters. If saltwater intrusion continues unabated, impoundments will play an increasingly important role in the preservation of fresh and intermediate marshes.

Water management inside impoundments is geared toward promoting conditions which favor certain species of animals. This most often means production of certain preferred foods. Preferred target foods in impoundments on Rockefeller Refuge have been found to make up over 50 percent of the total plants, whereas in adjacent unimpounded control areas the same perferred food plants make up less than 5 percent of the plants present.

Target species of animals are not the



Management of freshwater marsh—Marsh is drained in summer (left); wild millet emerges on the dry ground (center). Once the millet is mature (right), the marsh is re-flooded making the millet available to waterfowl.

only ones to benefit from impoundments. Habitat enrichment has general benefits that help many non-target animals.

Impoundments are broken into two general groups, those with alternating water levels and those permanently flooded. Water control structures include pump stations for forced drainage, flap gates that allow one-way flow for gravity drainage, stop log structures that act much as variable-height weirs and any combination of the three. Stop logs are often used in conjunction with both pumps and one-way flap gates to allow drainage of excess rainwater and at the same time prevent tidal inflow.

This diversity of water control structures opens impoundments to a wide variety of management applications. The waterfowl management program at Rockefeller Refuge exemplifies this variety. Some freshwater impoundments on the refuge are drained annually during summer months to allow germination of herbaceous annuals such as millet whose seeds are considered preferred duck food. Other freshwater impoundments left permanently flooded produce a predominance of duckweed, a less desirable though still usable duck food.

Widgeongrass, another preferred duck food, is the dominant species in brackish permanently flooded impoundments. Stop log/flap gate structures are used to drain these brackish impoundments once every three years to allow the waterbottom to cement together and thus decrease turbidity, a limiting factor in widgeongrass production. These same flap gates also allow utilization of the impoundment by marine organisms. When significient numbers of post larval shrimp show up in samples in canals leading to the impoundments, the gates are reversed, thereby allowing ingress of adequate post larval shrimp without drastically altering the water level or salinity of the impoundment.

Impoundments and semi-impoundments are not cure-alls that will solve all problems of the coastal marsh. They were never intended as such. They are, however, an important management tool that is in use today to help preserve and enhance this valuable, yet fragile, Louisiana treasure.

Water control structures at Rockefeller Refuge provide sites for recreational fishing, shrimping, and crabbing.

Proper marsh management benefits both wildlife and man.

Lloyd Poissenot

OF COTTONTAILS AND SWAMPERS

By Maurice Cockerham
Photography by Mark Saltz

Whether you go after swamp rabbits along a bottomland slough, or cottontails in a farmland hedgerow, rabbit hunting is a challenging and enjoyable sport. For the successful hunter, a few of either species can add up to some delicious rabbit stew to please both family and friends.

The dogs were working a very thick tangle of briars near a gravel road some distance away. From the sound of the baying pack they were having a bit of trouble unraveling the trail. I stopped at the top of a small hill on the edge of the briarpatch and slipped my shotgun to port arms. Suddenly there was a slight movement at the edge of a small draw to my left.

This was no hopping, bounding, ziz-zagging cottontail. The bundle of dirty brown fur looked half as big as one of the beagle hounds chasing him amd he was quite deliberately walking across a small opening. No mere bunny rabbit, this was a king-daddy rabbit. A cane cutter. A swamper.

At my first movement, the action shifted into high gear. The big rabbit broke sharply to the left and a whole load of shot plowed into the ground were he had been instead of where he was. Then he cut back toward the briars again but the next shot cancelled his trip before he reached cover.

Swampers are truly super-rabbits. Often more than twice the size of the more abundant cottontail, they are found in marshy, low lying areas and are considered a special prize by every rabbit hunter. The little beagle hounds probably don't share that enthusiasm however, because a swamper generally runs a lot faster and a lot farther than a cottontail before beginning his sweeping circle back to the starting point. Swampers also take to water readily and are strong swimmers. That poses still another problem for the trailing dogs. When a big swamp rabbit hits the water and swims across or, as they have been known to do, simply floats downstream with only a tiny black nose above the surface, the dogs can have a tough time regaining the trail. Even the best of dogs will lose a swamp rabbit from time to time.

Swamp rabbits are considerably larger than the more common eastern cottontail. It is not uncommon for them to weigh five or six pounds and that is a lot of hasenpfeffer (a spicy rabbit stew). Their movements are also quite unlike those of the cottontail. Undisturbed, they have a very peculiar habit of walking along rather than "hippity hopping" like old Peter Cottontail. When frightened, they tend to run straight and fast, rather than zig-zagging from side to side, and their speed over a short distance is astounding.

Swamp rabbits are also quite selective about their habitat. Although they can be found throughout Louisiana, they are not as widely nor evenly distributed as the cottontail. Swampers stick to the bottomlands along creeks and rivers or sloughs and "slashes." Hardwood swamps that flood occasionally and contain medium to thick undergrowth are prime territory, particularly if there are a few dense canebreaks (hence the name "cane cutter") and agricultural crops such as corn or soybeans nearby.

The only other noticeable difference between the cottontail *(Sylvilagus floridanus)* and the swamp rabbit *(Sylvilagus aquaticus)* is in coloration. The swamp rabbit's fur is longer than that of the cottontail, and is a darker, denser brown color. Cottontails are usually grey to light brown, and their distinctive, fluffy white tail is simply not matched by the swamp rabbit.

Many hunters claim that the swamper is also a more difficult target than the cottontail. I have never found this to be true. Their size, plus a tendency to run in a fairly straight line, makes them easier to hit despite their speed. Hunters armed with a .410 or 20-gauge scattergun may, however, find themselves "undergunned" when trying to stop a really big swamper at other than point blank range.

On this particular trip, we were the guests of Jackson, Louisiana Mayor Jimmy Norsworthy. His property, north of Jackson in the vicinity of Thompson Creek, contained a variety of habitat types, including open farmland that practically guaranteed a mixed bag of swampers and cottontails. Jackson barber D.H. Goldsby and his son Danny provided the dogs, while photographer Mark Saltz and wildlife enforcement agent Tom Woodside filled out the firepower slate.

Although it was still a little early in the season and a bit warm and dry for good trailing, the dogs managed to put up a good supply of rabbits and lost very few. Oh, if only the gunners had done as well! Young Danny was deadly with his light 20 gauge, from the hip or from the shoulder, but the rest of us managed enough clean misses to keep the shot shell manufacturers very happy.

Although hunting rabbits with a good pack of beagle hounds is still the classic method and unequalled for sheer fun, it is not the only way to enjoy a productive day in the briars and brambles. Nor is it as popular a sport as it was in the 1950s and 1960s. The never ending rush to "progress" has seen much of the prime rabbit habitat destroyed. Subdivisions and shopping centers have replaced the brushy bottomlands and pastures in too many cases. On the remaining farms, the rambling and picturesque overgrown fencerows of yesterday have been replaced by neat ribbons of wire fastened to straight lines of naked iron posts. Even the weeds are not allowed to grow beneath the wire. The little pockets of dense cover that filled the corners of fields and grew wild across the headlands have been cleared so that every available square foot of land can be tilled. Bottomlands and swamps are being drained and converted at a frightening rate. All this means less cover and habitat for both game and nongame creatures and less room for dogs to chase their quarry.

But rabbits are very adaptable critters, particularly the cottontail. He simply requires a bit of cover for nesting and escape from his natural enemies, and a nearby food supply. This has traditionally meant the thick growth at the edge of a field or wooded area, but as progress has destroyed these areas, the rabbits have shifted to other types of cover. Many of these do not provide the elbow room for a pack of hounds. But two or more hunters working together can walk up a good bag of cottontails if they seek out these newer cover areas.

One of these "new" areas is the swath of brush and undergrowth that almost always surrounds new construction sites. There is usually a fair delay between the clearing of land for a new development and the beginning of construction. The delay may last for several years and very good rabbit habitat is provided by the piles of brush and trees and the thick growth that springs up along the boundaries of such areas.

Another good bet is the thick cover that grows up in power line rights-of-way. In most cases, the power companies trim the brush only enough to allow for maintenance of the lines and do not completely clear the right-of-way. This practice, although assuredly not done with rabbit hunters in mind, maintains ideal habitat indefinitely.

Rail lines also offer good potential, particularly where they are bordered by woods or swampy areas. If the tracks are abandoned or lightly used, the potential of the overgrown right-of-way is even better.

This type of hunting requires some mental effort for success. The hunter must be familiar with the habits of the furry little critters or he may return home with an empty bag. One productive tactic is to try and think like a rabbit. If the wind is blowing cold and wet, you would abandon open fields in favor of the protection of a thickly overgrown bottom. After all, a rabbit's fur is thick and warm, but not windproof. On the other hand, on a cold but calm and sunny day, you'd head for open areas with only light cover so that the warm sunshine could easily reach you.

In recent years, more and more landowners and sportsmen have realized that current land management practices are the major factor in the apparent disappearance of small game animals such as rabbits. Many have also learned that the small game can be brought back quickly, and actively managed as a renewable resource, right along with domestic stock and agricultural crops, with very little effort. Sportsmen who do not own land are finding that they can work out mutually beneficial arrangements with farmers and other landowners. There are even programs available to help sportsmen and landowners renew and enhance small game habitat.

A successful management program begins with knowing something about the needs of the game animal itself. In the case of swamp rabbits and cottontails, their life cycles and basic survival needs are very similar despite the difference in preferred environments. The swamp rabbit sticks to low lying areas, while the cottontail prefers higher elevations, but their ranges invariably overlap.

Both swampers and cottontails are prolific reproducers. Despite this, the population is held in check by natural predators such as hawks, foxes and owls, by adverse weather conditions, by disease, and by hunting. Only about 20 percent of the rabbits born in a given year will live longer than 12 to 15 months. Studies have shown that this figure will remain stable either with or without normal hunting pressure.

The major breeding season for rabbits begins in February and continues through October. The majority of the season's young are born in April, May and June. Males and females, known as bucks and does, court briefly before mating. Bucks will breed promiscuously but the doe, once bred, will have nothing more to do with a male until after her young are born. However, the doe will breed again shortly after giving birth, sometimes within only a few hours.

A pregnant doe prepares a nesting site near the end of the normal 28 to 30 day gestation period by digging a shallow pit and lining it with grass and leaves. She then plucks hair from her breast and stomach to complete the lining.

The average litter contains four to six blind, deaf and hairless babies. The doe nurses the young and then places them in the nest, covering them with a layer of grass and leaves. She does not return to the nest except to nurse the litter, usually at dawn and dusk.

The young rabbits grow rapidly if they or the doe are not eaten by predators. Their eyes open in a week, and by the end of the second week they are venturing out of the nest. By the end of the third week they have left the nest permanently and are on their own. By that time the doe is usually pregnant again. She may have five litters and produce 25 or more young during a single year.

Young rabbits are capable of breeding when they are two months old, and these first year breeders normally produce 15 to 25 percent of the young rabbits present in the fall population.

Rabbits eat almost any type of vegetation, including seeds, grain, fruit, grasses, weeds and tender bark. Under normal conditions, they receive sufficient water for their needs from dew and moisture contained in green vegetation. If green succulent grasses are available throughout the year, no other water supply is necessary.

In addition to the food supply, rabbits require two types of cover. Nesting cover, for the birth of the young rabbits, is sought in undisturbed grass and weed patches along fencerows, on pond dams, or in idle fields.

Escape and resting cover is equally important. This is usually provided by briar patches, thick undergrowth, and by brushpiles and holes in stumps, logs or even in the ground.

Studies have indicated that the maximum number of rabbits a given area will support is about five per acre, with one rabbit per acre considered a very good density figure.

One habitat enhancement program available to landowners, or to sportsmen or others who have a landowner's permission on a small area, is the "Acres for Wildlife" project operated by the Louisiana Department of Wildlife and Fisheries. Each applicant or group must have at least one acre of property available outside the incorporated limits of a city or town. After a survey of the site and nearby land uses, the department will provide guidance, advice and the seeds to establish food plots and cover. Other programs are available through state and federal soil conservation agencies. Most erosion control projects also promote excellent food and cover for small game.

Some landowners are establishing their own game management and enhancement programs. They allow fencerows to grow up once more and leave the wild growth in the corners and headlands of their fields. They allow undergrowth to reclaim unused gullies and ditchbanks. Many even systematically leave a row or two of food crops such as soybeans in the field after harvest. The result is not only a return of the aesthetically pleasing farm scenes, but also a rapid and bountiful return of small game and birds.

Landowners with more extensive property have also learned that properly managed wildlife represents a continuing resource with a growing economic potential. Owners of substantial timberland, for example, are finding that land managed for wildlife as well as timber can produce substantial income through hunting leases.

The point is, the exciting and challenging sport of rabbit hunting is still very much available to the hunters of Louisiana, both rural and urban, and you don't have to have a pack of hard running beagles to enjoy a day of good shooting fun topped off with a delicious rabbit stew. You simply have to adjust your way of thinking and, perhaps, work a little harder. Better still, with only a minimum of effort and expense, you can probably find a suitable place and grow your own.

Editor's note—We thank D.H. Goldsby for sharing this recipe with us. For more rabbit recipes, see "Pie's Potpourri" on p. 31 of this issue.

D. H. GOLDSBY'S RABBIT STEW

5 rabbits
2 cups oil
2 cups flour
2 cans tomatoes
7 onions
1 Tbsp. salt
¼ tsp. black pepper
⅛ tsp. red pepper
¼ tsp. garlic powder
¼ tsp. MSG
3 oz. Taylor Golden Sherry
2 tsp. sugar

Brown rabbits and remove from oil. Make dark roux of flour and oil. Add chopped onions and cook until clear, then add other ingredients and rabbits. Cover with water and cook slowly (3 to 5 hours), stirring occasionally, until meat is very tender and gravy is thick. Season to taste while cooking. Serve with rice.

Take a Trip to

By Judy Hughes Marte
Photography by Mark Saltz

TOLEDO BEND

...and stay at any one of hundreds of parks, marinas, and recreation sites along the 185,000-acre reservoir on the Louisiana-Texas border. Among the choices are recreation sites owned by the Department of Transportation and Development, one of which—the new Sammy Gill Park—has been recently renovated and leased to provide optimum services to Toledo Bend visitors.

Since its impoundment in 1966, Toledo Bend Reservoir on the Louisiana-Texas border has gained national recognition for its bountiful recreational opportunities. Millions of Louisianians and out of state visitors come to the 185,000-acre lake each year to fish, swim, boat, picnic, camp and simply enjoy the lake's beauty.

There's no shortage of recreational facilities or places to stay at Toledo Bend—the lake's sinuous shoreline is dotted with campgrounds, motels, marinas, cabins, bait and tackle shops, equipment rental stores, and restaurants.

While most of the lake's shoreline property is privately owned, there are five recreation sites along the Louisiana side that are owned by the Department of Transportation and Development. Yes, the DOTD—what most of us associate with the state's highways and bridges. The DOTD acquired the sites along Toledo Bend because of their involvement with the engineering and construction of the Toledo Bend Dam and formation of the vast impoundment.

Two of the DOTD recreation areas, sites 2 and 4, provide boat launching ramps and restroom facilities only. Sites 11 and 15 provide boat launching ramps, travel trailer spurs, tent camping sites, picnic areas, and restrooms with showers. Site 15 also has overnight shelters with electricity.

The fifth DOTD site is Sammy Gill Park, also known as recreation site 7A. Though owned by DOTD, Sammy Gill is leased to a private concern which operates and maintains the area.

Sammy Gill Park had been leased to a private firm prior to 1981, but was operated by DOTD from 1981 to early 1983. During this time DOTD, which is not really in the business of running recreational facilities, found it was not able to operate the park as effectively as it wished. They were losing money and were not providing all that Sammy Gill had the potential of offering to the public. Thus, Paul Hardy, Secretary of DOTD, and the Sabine River Authority, Toledo Bend's 12-man policy making board, decided to again lease Sammy Gill to a private concern. They believed this to be in the best interest of the park, the state and the many visitors to Toledo Bend.

The area was leased in March 1983 to Kajun Properties, Inc., a subsidiary of the Houma Oil Company. Kajun Properties pays a monthly fee to DOTD and is required by the lease to make permanent improvements to Sammy Gill Park. All improvements must be approved by DOTD and become property of the state.

Sammy Gill Park is a 100-acre forested site located six miles from Zwolle, Louisiana on the San Miguel arm of Toledo Bend. Since acquiring the lease, Kajun Properties has completely renovated the park and added new facilities.

The park's 19 A-frame cabins have been repaired, furnished, and equipped with refrigerators, stoves, dishes, indoor bathrooms with showers, and heat and air-conditioning for year-round comfort.

A spanking new restaurant and store now sits near the park's boat launch. And, nearby, a new, enclosed fish cleaning station provides comfort and convenience for successful fishermen.

The park's boat launch is said by many to be one of the best on the entire lake. It lies on the park's protected cove, free of the wind's menacing action.

A wooden bridge over one of the quiet coves at DOTD recreation site 15, just north of the Toledo Bend dam.

The park has 40 recreational vehicle sites and 25 tent camping pads. There is also a full-service marina, a swimming beach and large bath house, and three picnic/barbeque pavilions.

The park's cabins and tent and trailer sites are nestled among picturesque pines, cypress and hardwoods on gently rolling terrain typical of the Toledo Bend shoreline.

The manager at Sammy Gill, Steve "Strawberry" Philips and his wife Nancy, add a unique personal quality to a stay at Sammy Gill. They each wear many hats—performing all necessary duties, from cooking to maintenance, in order to provide the best possible services to their customers.

Sammy Gill Park offers an ideal location for enjoying the out-of-doors through activities ranging from family picnicking and camping, bird watching and skin diving, to participation in local, state and national bass fishing tournaments.

Black bass fishing is probably the most popular sport at Toledo Bend. There are bass tournaments all along the lake from early March through October, and some even in the winter months. Fishermen come from around the country to try their hand at Toledo Bend bass, and some local anglers go out almost daily for these delectable freshwater game fish.

Toledo Bend also offers fine catches of bream, sac-a-lait (crappie) and catfish. And, an ever-increasing number of anglers are going after the lake's newest fishery—striped bass. Stripers have been stocked in Toledo Bend by the Department of Wildlife and Fisheries for many years. They are hard-fighting, challenging game fish that can weigh up to 50 pounds. And they are great tasting fish. For more information of Toledo Bend's striped bass see *Louisiana Conservationist* January-February 1983 ("Success with Stripers") and May-June 1983 ("Striper Strategies").

DOTD recreation sites 11 and 15 are farther south on the lake than Sammy Gill. Site 11 is 18 miles southwest of Many, Louisiana, and site 15 is approximately 3.5 miles north of the Toledo Bend dam. Both areas provide boat launching ramps, a swimming beach, and camping sites among mixed pine-hardwoods.

Soon visitors to Toledo Bend will have the option of staying at either of two new state parks. The Office of State Parks of the Louisiana Department of Culture, Recreation and Tourism, which presently operates 12 state parks throughout Louisiana, is working on two new parks at Toledo Bend. Construction is already underway on the North Toledo Bend State Park, which will cover some 650 acres on the north side of the San Miguel arm of Toledo Bend, across from Sammy Gill Park. The park should be completed in mid-1985. Work will begin soon on the South Toledo Bend State Park which will cover 1,000 acres at the south end of the reservoir near the dam.

Both new state parks will offer boat ramps, vacation cabins, travel trailer and tent camping sites, playgrounds, swimming pool, and trails. Louisianians can look forward to these two additions to the state parks system.

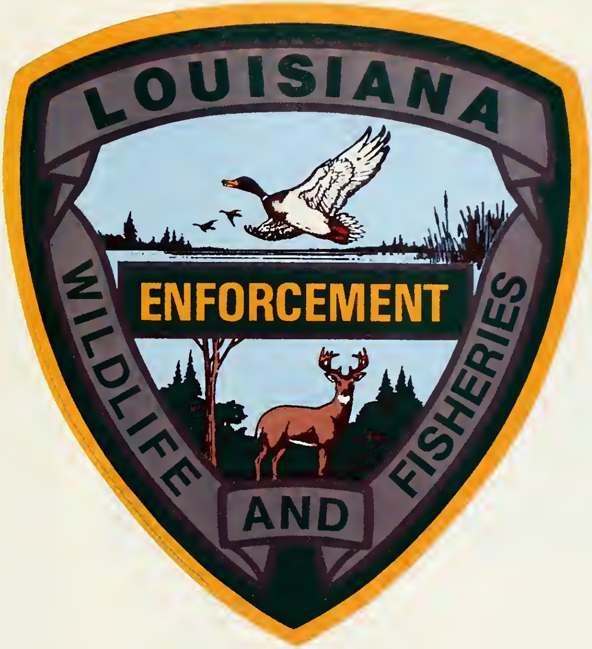
Besides the planned state parks, the DOTD recreation sites and Sammy Gill Park, there are hundreds of privately-owned marinas, campgrounds, motels, and vacation parks bordering Toledo Bend, all providing the services necessary to make a stay at the reservoir both comfortable and enjoyable. A list of these many facilities along the Louisiana side of Toledo Bend is available from the Toledo Bend Tourist Information Center, Rt. 1, Box 350, Many, LA 71449. The tourist center, located at the Pendleton Bridge on Hwy. 6 west of Many, is open from 8 a.m. to 4:30 p.m. every day except Christmas and Thanksgiving.

With 20- to 50-pound striped bass, an abundance of black bass, bream and other game fish, and hundreds of miles of shoreline for camping and swimming, it's no wonder millions of folks flock to Toledo Bend reservoir each year.

At Toledo Bend, a good time is assured, whether you stay at Sammy Gill Park, recreation site 11 or 15, or at any one of the many privately-owned facilities along the lake. Wherever you stay, stay a while. It'll be worth it.

Bob Dennie

The new Sammy Gill Park has a protected cove, a fine boat launching ramp, a new store/restaurant, and a full-service marina (left). A-frame cabins at Sammy Gill (right) have been recently furnished and renovated for year-round comfort.



Enforcement Division....
A NEW LOOK

By Judy Hughes Marte
Photography by Mark Saltz

The Louisiana Department of Wildlife and Fisheries Enforcement Division has a new look. And that's not all. They also have new equipment, new training, new programs—a whole new image.

When you see wildlife and fisheries law enforcement agents today they stand out respectfully. Their vehicles display a brand new decal that clearly identifies the agents as enforcement officers and their uniforms bear the same bold identification in shoulder patch form.

The new shield-shaped patches and decals were designed to clearly identify wildlife agents as law enforcement officers, according to Enforcement Division Chief, Col. Ray Montet. The new shield is different also from the boot-shaped decal of the Louisiana State Police and some other agencies and businesses.

The new shoulder patch and decal are a cover for a whole new book for the Enforcement Division.

During the last two years, the division has acquired some important new equipment to better help the 240 field agents perform their duty of enforcing state and federal wildlife and fisheries laws and be of service to the thousands of Louisianians who enjoy the out-of-doors.

In 1982 and 1983, the division acquired new four-wheel drive vehicles, three-wheelers and LTD Crown Victoria Police Specials. New for the division also are electronic sirens and lights for the vehicles—equipment vital for effective law enforcement work.

Until this year, the enforcement agents had radio communications only on a wildlife and fisheries frequency. They could communicate with each other but not with any other law enforcement officers of other agencies. In 1983 the division received permission from the Louisiana Sheriff's Association to use the 39.5 frequency and has now purchased 100 39.5 radios. They plan to buy additional 39.5 radios in the near future so that all agents will be equiped with this frequency and will be able to communicate with other law officers when they need assistance at any time of day or night.

Even with all the new equipment acquired, the division's budget has only increased 11, 10, and 6 percent respectively in each of the last three years, according to Col. Montet. In light of inflation rates during these years, the division has virtually had a standstill budget. They have streamlined other aspects of the division in order to acquire the new equipment necessary for effective law enforcement work.

Perhaps the most important new change for the Enforcement Division is the stepped-up training for the agents.

Since November of 1982, wildlife enforcement agent trainees have been required to attend the State Police Academy for basic training and special seminars. Here they receive eight weeks of intensive law enforcement instruction, including one full week of specialized wildlife enforcement training.

Every wildlife enforcement agent trainee must pass the eight week course, says Col. Montet, in order to remain an enforcement agent with the department.

With new 4-wheel drive vehicles and better radio communication equipment, wildlife enforcement agents are able to effectively perform their law enforcement duties.

"Our goal," says Lt. Col. Winton Vidrine, assistant chief of the Enforcement Division, "is to build a *professional* law enforcement division." They are striving for the best possible equipment and the best possible, well-trained agents.

"We want to get away from the old 'part-time game warden' image," explains Col. Montet. "Our agents are full-fledged professional law enforcement officers."

Stepped-up training of agents at the Police Academy includes increased training in first-aid, swimming and marksmanship. In addition, agents are now receiving special training in the use of the photo-electric-intoximeter (PEI), a machine that determines the amount of alcohol in a person's bloodstream. Col. Montet considers this training necessary because the agents are increasingly confronted with intoxicated motorboat operators. With training in the use of the PEI, the agents can, if necessary, take a motorboat operator to a sheriff or police station and check his alcohol level.

Whereas wildlife agents usually work only in their assigned districts, a new division program is bringing 16 hand-picked agents together as a "SWAT" team (Special Wildlife Agent Team). These officers will stay working in their assigned regions except when a problem arises somewhere in the state.

Unfortunately, Louisiana continues to be plagued with habitual wildlife law violators. In areas where excessive poaching occurs, the SWAT men will be called upon to assist the local agents. These men will not work undercover, but rather will be very conspicuous and will stay in the area for as long as necessary to combat the illegal activity.

The Department of Wildlife and Fisheries has long encouraged the assistance of the general public in identifying wildlife law violators. The department has a toll-free number individuals can call to report illegal activity. This number is used for other purposes as well, however, such as obtaining general wildlife and fisheries information. The Enforcement Division is beginning a new "Operation Game Thief" campaign to solicit public help in wildlife law enforcement. A new hot-line toll-free number is being established which will be solely for reporting information concerning wildlife law violations.

There is a reward system associated with the new "Operation Game Thief" campaign. A nine to 12 member board is being established to solicit donations to pay rewards for information leading to the arrest and conviction of a wildlife law violator. The board will decide on the reward to be given to an informant. Callers can remain completely anonymous if they choose and will be given a code number. The toll-free hot-line will be manned 24 hours a day and on weekends and holidays.

Similar anti-poaching programs, with toll-free numbers and rewards, now exist in 30 other states around the country. They have proven to be effective in increasing the number of arrests and convictions and deterring poaching activity.

Other changes in the Enforcement Division in the last year have included the transfer of the department's Firearms and Hunter Education program from the Information and Education Division to the Enforcement Division, a new stepped-up boating safety program, and a new Saltwater Enforcement Patrol.

The Hunter Education Section was placed under the Enforcement Division in the latter part of 1982 after a thorough review of the procedures in wildlife agencies of other states. Although many enforcement agents previously were certified as volunteer instructors, now all enforcement agents will be certified to teach hunter safety programs. This increase in manpower will greatly aid the section in certifying Louisianians as safe hunters.

All expenses incurred by enforcement agents while performing hunter education duties are charged to the federally funded hunter education program. This allows for full use of available federal funds which were not fully used in previous years. The expansion of the hunter education program will enable the staff to better meet the demands of the public if hunter safety certification becomes mandatory in Louisiana as it is in 30 other states.

In April of 1983 Col. Montet was named Boating Law Administrator for the state and a boating safety section was established. Wildlife agents around the state are now assisting in the new statewide boating safety program aimed at reducing the number of Louisianians who are killed or injured each year in boating accidents. (see "Boating Safety Saves Lives," Louisiana Conservationist, May/June 1983, p. 11-13).

The new Saltwater Enforcement Patrol is charged with monitoring and protecting our state's estimated 2.2 billion dollar commercial fishing industry. This responsibility includes patrolling all coastal waters south of the Intracoastal Canal and enforcing shrimping, oystering and commercial fishing laws.

The division is able to effectively perform this function with the aid of two large patrol vessels obtained in 1983 —the 47-foot "Delta Tide" and the 65-foot "Rip Tide." These vessels patrol along the coast seven days a week, the "Delta Tide" working on the east side of the Mississippi River in the Chandeleur and Louisiana marsh areas and the "Rip Tide" working west of the Mississippi River, including waters in Barataria Bay, Calacasieu Lake and Vermilion Bay.

With the new vessels, the Enforcement Division is now effectively securing and monitoring the state's commercial seafood industry—an industry that has not been fully monitored in the past.

The Enforcement Division plans to continue improving its programs to increase its effectiveness in serving the people of Louisiana. All of the new programs, training, equipment, and the "new look" of the agents, are aimed at making hunting, fishing, boating and other commercial and recreational outdoor activities better for all of us.

The department's "Rip Tide" (above) patrols the Louisiana coastline west of the Mississippi River while its sister ship, the "Delta Tide," patrols to the east. Both are helping to monitor the state's valuable seafood industry.

A GIANT STEP...

Tensas Purchase

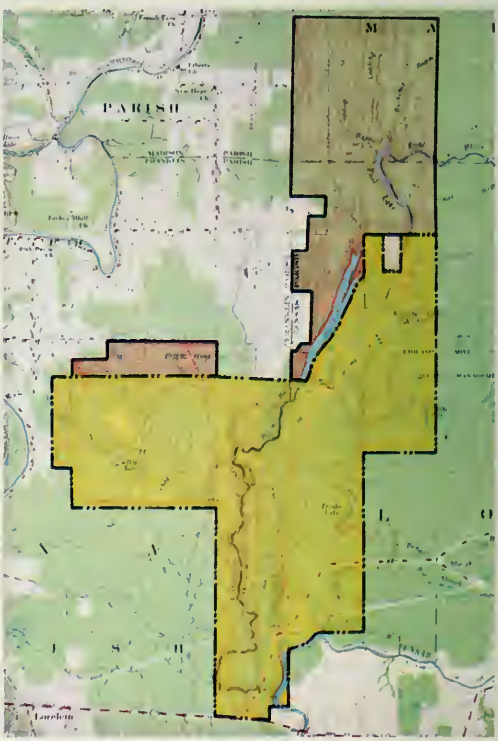
Efforts to save a portion of the most significant remaining pocket of bottomland hardwoods in the Mississippi Valley took a giant step forward recently with the purchase by the state of almost 10,000 acres of the Tensas tract located in Madison, Tensas and Franklin Parishes in northeast Louisiana.

In addition to the 9,823.47 acres purchased outright at the December 29, 1983 sale, a one-year option to purchase an additional 4,887.63 acres was also acquired. The option secures the price of the land at its present level and gives the state immediate control of the property.

The $9,577,883.25 paid for the purchased tract and the $4,765,439.25 price tag on the optioned land will both be paid from funds generated by mineral exploration on the state-owned Rockefeller Wildlife Refuge. Although funds for the additional purchase will be available, the actual cost must await legislative approval.

The purchased and optioned lands will be open to the public immediately for non-consumptive uses like birding and nature study, while hunting activity must await the 1984-85 season to allow for a thorough habitat and wildlife survey and development of an appropriate management plan. The tract will offer excellent deer, rabbit and squirrel hunting along with waterfowl hunting and fishing in its many sloughs, bayous and woodland lakes. The acreage also has potential as a good turkey area.

Due to the hard work and active support of persons like Governor Dave Treen, Senator J. Bennett Johnston, Congressman Jerry Huckaby, Secretary Jesse Guidry of the Department of Wildlife and Fisheries, the Wildlife and Fisheries Commission and numerous conservation groups and concerned individuals, this newly purchased state land, when combined with current and planned federal purchases, means that almost 50,000 acres of some of the best wildlife habitat in North America will be saved for wildlife and public enjoyment for future generations.



The Tensas land recently purchased by the state lies in Madison, Franklin and Tensas Parishes. The yellow area above is the land purchased outright; the red area is optioned land which awaits legislative approval.

Conservationotes

McFadden Duffy Retires as Editor of Louisiana Conservationist

McFadden Duffy, long associated with *Louisiana Conservationist,* retired December 30 from his position as editor of the magazine and chief of the Information and Education Division of the Department of Wildlife and Fisheries.

Duffy joined the department in 1960 and served in various capacities in the former Information Section. He was editor of the *Louisiana Conservationist* from 1969 to 1973 during which time the magazine went from a 24-page black and white publication to the present 32-page full color magazine.

In 1966 Duffy was the recipient of the Governor's Conservation Communications Award in the annual conservation awards program sponsored by the Louisiana Wildlife Federation and Sears-Roebuck, in cooperation with the National Wildlife Federation. In 1969 the *Louisiana Conservationist* won this same award.

Prior to his affiliation with the Department of Wildlife and Fisheries, Duffy served for 14 years as public relations director for the International House in New Orleans. While at International House and later with Wildlife and Fisheries, he was outdoor editor of the New Orleans Times-Picayune from 1955 to 1973. He wrote four weekly columns called "All Outdoors."

Duffy was named chief of the department's Information and Education Division when that division was formed in early 1982. This new division merged the former Information and Education Sections. As chief, Duffy served as editor of *Louisiana Conservationist* and planned, coordinated and administered the many other activities of the division.

There are many *Louisiana Conservationist* readers who have followed the writing of McFadden Duffy from his early "All Outdoors" column and his first article in the magazine ("Bass with a French Accent!," November-December 1960) to his most recent articles such as "The Christmas Bough" and "Atchafalaya Acquisition" in the November-December 1983 issue. Readers both old and new will miss seeing Duffy's byline in *Louisiana Conservationist* and miss his unique personal, warm style of writing.

Many Louisiana outdoorsmen are familiar with Duffy's book, Hunting and Fishing in Louisiana, published in 1969 by Pelican Publishing Company. They will be glad to know that one of Duffy's retirement plans is to complete a second hunting and fishing book, filled with more stories and accounts of personal outdoor adventures in Louisiana.

The *Louisiana Conservationist* would not be as it is today without the 23 years of contribution and dedication of McFadden Duffy. We, the magazine staff and the entire department, owe much gratitude to Mac and wish him the best of luck in his new endeavors.

Wildlife Booklet Available

Copies of the popular booklet, "Helping Wildlife: Working With Nature" can be obtained from the Wildlife Management Institute. Written by Colorado State University wildlife specialist Delwin E. Benson, the illustrated, 36-page booklet was prepared as a nature and wildlife management primer for youngsters 8-18 years old. More than 55,000 copies of the booklet have been distributed, and their usefulness as a teaching aid and instructional medium has received acclaim from educators and students alike. Single copies may be purchased for $1.50 from the Wildlife Management Institute, Suite 725, 1101 Fourteenth Street, N.W., Washington, D.C. 20005. Bulk order rates are available on request.

SUPPORT LOUISIANA'S NONGAME WILDLIFE PROGRAM

MAKE A WILD INVESTMENT

Louisianians can make a wild investment by donating all or part of their 1983 state income tax return to a special wildlife fund. The money goes to the Department of Wildlife and Fisheries to be used primarily for a new and important nongame wildlife program for the state.

By donating all or part of your state tax return, or by writing a separate check to the department for this program, you can make an important investment in the well-being of Louisiana wildlife. It's an investment that will pay off for you and for future generations of Louisianians who can continue to enjoy our state's wildlife as a result of the department's management efforts.

The income tax "check-off" for wildlife is the result of Act 784 of the 1981 Louisiana legislature. The tax return donations are being used by the department to fund a nongame wildlife management section, to go into effect July of this year. Plans for the section include an inventory of the state's nongame wildlife, preparation of educational materials about Louisiana's nongame species and urban wildlife, construction of nature trails, enhancement of nongame habitat, and more.

For a full-length story on the income tax check-off and the new nongame program, see *Louisiana Conservationist,* November/December 1983, "Give a Gift to Wildlife" (p. 26-29). You'll be seeing more about the department's new nongame section in future issues of *Louisiana Conservationist.*

When you sit down to work on your 1983 Louisiana income tax return, look for the line for a donation to wildlife and make a *wild* investment.

Wild Turkey Convention

The Eighth Annual Convention of the National Wild Turkey Federation, Inc., will be held at the Sheraton New Orleans Hotel on Canal Street February 24-25.

Highlighting the Friday program will be the conservation and turkey hunting seminars, topped off by an evening of fund raising activities featuring an art auction and the world's first all-camouflage fashion show. L.A. Rams quarterback, Bert Jones will emcee the show.

Saturday's program will feature commercial exhibits by turkey call makers and other sporting goods manufacturers, how-to seminars on spring and fall turkey calling and hunting, the Grand National Wild Turkey Calling Championships, an owl hooting contest, and the annual banquet, with Grits Gresham as master of ceremonies.

J.C. "Sonny" Gilbert of Sicily Island, Louisiana, is national president of the NWTF, a 35,000-member nonprofit group dedicated to the conservation of the wild turkey. Headquarters for the Federation is in Edgefield, SC.

Dr. T. Scott Strickland of West Monroe is president of the Louisiana chapter.

All wild turkey enthusiasts are urged to attend the NWTF convention. For more information contact Scott Strickland (318-396-2691) or Gene Smith (803-637-3106).

Five Louisiana Students Win in NHF Day Poster Contest

Dave Paul Fabares of Norco, Garry Badeaux and Troy Stumpf of Des Allemands and Dean Young and Wendy Songy of Luling were all winners in the 1983 National Hunting and Fishing Day Poster Contest.

Dave, an eighth grader at Sacred Heart School, won an Honorable Mention Award in the Junior Division and will receive a $75 U.S. Savings Bond. Garry, also an eighth grader at J.B. Marin Jr. High School, won an Honorable Mention Award and will receive a $75 U.S. Savings Bond. Dean, an eighth grader at Lakewood Jr. High School, won a Merit Award and will receive a $50 U.S. Savings Bond. A Merit Award and a $50 Bond was also won by both Troy, a sixth grader at R.J. Vial School, and Wendy, tenth grader at Hahnville High School. Their entries in the poster contest were sponsored by the South Louisiana Sportsman and Abe Cochran.

Their posters were among the thousands entered in local NHF Day poster contests sponsored by schools, sportsmen's clubs and civic groups throughout the country. In addition to local prizes, there were 52 national awards totaling $5,200 in U.S. Savings Bonds for youngsters who best illustrated the contest theme "Sportsmen and Conservation: Building a Future for Wildlife."

Designed to foster an increased awareness of the need for conservation and the role sportsmen play in America's conservation efforts, the 1983 NHF Day poster contest was open to all students in grades 5-12.

Finfish Creel Survey

Beginning January 1 and continuing throughout 1984, fisheries personnel with the Louisiana Department of Wildlife and Fisheries will be conducting an extensive coastwide finfish creel survey.

The survey is designed to collect information on the status of coastal finfish stocks, including speckled trout (spotted seatrout) and redfish (red drum), that is essential to developing a comprehensive management program to protect these valuable renewable resources.

The federally funded project is part of the department's ongoing finfish research program and information gathered during the catch survey will fill a number of data gaps, including the actual take by Louisiana recreational fishermen and the effort expended to realize that take.

Using a system of randomly selected coastal area boat launches used by recreational fishermen, department personnel will interview anglers returning to the launches and examine their catch. The short interviews will consist of answering a number of predetermined questions such as where and how the fish were caught and if the species of fish caught were the species most sought. In addition, a few fish of each species will be measured and weighed to determine the average size of the catch and length/weight relationships.

The survey is not enforcement related and the need for accuracy and completeness in reporting the numbers and types of fish taken and the methods used in taking the fish is paramount. The department urges the cooperation of coastal fishermen asked to participate in this survey.

Change in NHF Day Poster Contest

In a significant change from past contests, the 1984 National Hunting and Fishing Day Poster Contest will be held and the winners announced during the current school year. This change was made to give more students the opportunity to participate in the poster contest and be eligible to win one of 52 national prizes including a $1,000 U.S. Savings Bond. The deadline for entries in the national contest will now be May 1, 1984.

The theme of the 1984 NHF Day Poster Contest, "How Sportsmen's Duck Stamp Dollars Help Wildlife," spotlights the important role funds from federal duck stamp purchases play in conserving wildlife. The theme was selected to coincide with the 50th anniversary of the federal duck stamp program. National prizes totalling $5,200 in U.S. Savings Bonds will be awarded to students who best illustrate the 1984 contest theme.

The NHF Day Poster Contest is open to all students in grades 5-12. In order to be considered for national awards, posters must first be winners in a locally sponsored NHF Day Poster Contest. On the local level, contests can be organized by schools, sportsmen's clubs, conservation or civic groups, newspapers, etc.

For information on how to sponsor or participate in a local National Hunting and Fishing Day Poster Contest, please write: NHF Day Poster Contest, P.O. Box 1075, Riverside, CT 06878.

MOVING?

If you are moving, be sure to send a change of address notice to *Louisiana Conservationist.* When you do, **be sure to include a mailing label with your old address** taken from the magazine. We must have this label to make an address change because it contains your computer account number. Compliance with this procedure will insure a prompt and accurate change of address. Mail the old label along with your new address to: Circulation Manager, Louisiana Conservationist, P.O. Box 15570, Baton Rouge, LA 70895.

Pie's Potpourri

By Marian "Pie" Pendley

Mark Saltz

Baked Squirrel

2 squirrels, cut up
flour
salt and pepper
oil
2 onions, sliced in rings
2 cloves garlic, minced
2 cans cream of mushroom soup
½ cup green onions and parsley

Coat squirrel pieces with flour seasoned with salt and pepper. Brown in oil and remove from skillet. Line baking dish with foil and place cooked squirrel in dish. Add onion, garlic and sprinkle with salt and pepper to taste. Blend soup with a small amount of water; pour over squirrel. Seal foil tightly. Bake at 325° for 2 hours. Open foil and add green onions and parsley, reseal and cook for additional 10 or 15 minutes. Serves 2 to 4.

Rabbit Sauce Piquante

2 rabbits, cut in pieces
1 cup oil (approximately)
½ cup water
2 tablespoons Kitchen Bouquet
4 tablespoons flour
2 tablespoons oil
1 cup chopped onions
1 cup chopped celery
½ cup minced green pepper
1 can tomato paste
1 cup water or white wine
3 cloves garlic minced
½ cup green onion tops & parsley

Season rabbit with salt, pepper and red pepper. Pan fry rabbit in oil for about 8 minutes, turning frequently. Cover pan tightly and allow to simmer for about 25 minutes.

In a separate pan, brown flour in oil. Add chopped onions, celery and green pepper until wilted and clear. Add tomato paste and water and cook over medium heat to desired thickness. Add rabbit and garlic and cook for about 20 minutes. Correct seasonings and add green onions and parsley for the last 10 minutes cooking time. Serve over rice. Serves 4 to 6.

Rabbit in Bag

1 cup flour
2 teaspoons salt
½ teaspoon pepper
2 rabbits, quartered
1 cup onions, chopped
2 cups celery, diced
3 tablespoons butter
¾ cup dry red wine
½ teaspoon Kitchen Bouquet

Preheat oven to 350°. Combine flour, salt and pepper in small size (10 x 16-inch) Brown-In-Bag. Add rabbit pieces and shake gently to coat. Spread out rabbit quarters in bottom of bag. Add onion, celery and butter. Combine wine and Kitchen Bouquet; add to bag. Secure bag with twist-tie and make several ½-inch slits in bag. Cook 1 hour or until tender. Spoon the sauce over the rabbit in serving dish. Serves 3 to 4.